

1. A method of creating an amorphous two-dimensional pattern of interlocking two-dimensional geometrical shapes having at least two opposing edges which can be tiled together, said method comprising the steps of:
  - (a) specifying the width  $x_{\max}$  of said pattern measured in direction  $x$  between said opposing edges;
  - (b) adding a computational border region of width  $B$  to said pattern along one of said edges located at the  $x$  distance  $x_{\max}$ ;
  - (c) computationally generating  $(x,y)$  coordinates of a nucleation point having  $x$  coordinates between 0 and  $x_{\max}$ ;
  - (d) selecting nucleation points having  $x$  coordinates between 0 and  $B$  and copying them into said computational border region by adding  $x_{\max}$  to their  $x$  coordinate value;
  - (e) comparing both the computationally generated nucleation point and the corresponding copied nucleation point in said computational border against all previously generated nucleation points; and
  - (f) repeating steps (c) through (e) until the desired number of nucleation points has been generated.
2. The method of Claim 1, wherein said pattern includes at least two pairs of opposing edges, each pair of opposing edges being capable of being tiled together.
3. The method of Claim 1, further comprising the steps of:
  - (g) performing a Delaunay triangulation on said nucleation points; and
  - (h) performing a Voronoi tessellation on said nucleation points to form said two-dimensional geometrical shapes.
4. The method of Claim 1, wherein said pattern includes two mutually orthogonal coordinate directions  $x$  and  $y$ , and wherein nucleation points are copied into a computational border in each coordinate direction.
5. The method of Claim 1, wherein said step of comparing said nucleation points includes a control factor to control the degree of randomness of said pattern.
6. The method of Claim 1, wherein the width  $B$  of said computational border is at least equal to the width of three columns of hypothetical hexagons.

7. The method of Claim 1, wherein said method includes the step of generating two-dimensional geometrical shapes from said nucleation points.
8. The method of Claim 7, wherein said method includes the step of deleting two-dimensional geometrical shapes resulting from copied nucleation points.
9. The method of Claim 7, wherein said method includes the step of saving two-dimensional geometrical shapes resulting from copied nucleation points.
10. The method of Claim 7, wherein said method includes the step of generating a physical output of the finished pattern of two-dimensional geometrical shapes.

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